Br J Vener Dis 1982;**58**:134-8

Abstracts

These selected abstracts and titles from the world literature are arranged in the following sections:

Syphilis and other treponematoses (clinical and therapy)

Neurosyphilis (editorial)
Br Med J 1981;**283**:263.

Secondary syphilitic uveitis
MW BELIN, AC BALTCH, AND PB HAY (Albany Medical College, Albany, New York, USA) *Am J Ophthalmol* 1981;**92**:210-14.

A case of secondary syphilis occurred in a 61-year-old-man who had presented with a panuveitis in both eyes which was unresponsive to steroids and associated with visual deterioration. There was no previous history of primary infection. The palms of the hands showed the erythematous macules of secondary syphilis. The lymphocyte count in the cerebrospinal fluid was increased. Fundoscopic examination showed macular oedema and slit-lamp examination keratitic precipitates with a flare in the aqueous humour. After aspiration of the vitreous and aqueous humours treponemes consistent with *T pallidum* were detected by darkground illumination with fluorescent antibody staining (although exact details of the technique used are not given) in the aqueous only.

Treatment with topical and systemic prednisolone (80 mg/day) was started before administration of intravenous penicillin G 3·5 megaunits every four hours. Despite taking prednisolone, the patient had a severe Jarisch-Herxheimer reaction with considerable loss of visual acuity in the unoperated eye, which slowly improved during the following week. After 21 days the uveitis had cleared. An anterior chamber paracentesis after a further eight weeks showed no treponemes. Visual acuity was nearly normal.

The authors' illustrations are very clear.

G D Morrison

Acute syphilitic optic neuritis
JM WEINSTEIN, SS LEXOW, P HO, AND A SPECKARDS (Vanderbilt University, Nashville, Tennessee, USA) *Arch Ophthalmol* 1981;**99**:1392-5.

Production of treponemicidal concentration of penicillin in cerebrospinal fluid
EMC DUNLOP, S AL-EGAILY, AND ET HOUANG (Whitechapel Clinic, London Hospital, London, UK) *Br Med J* 1981;**283**:646.

Current features of the clinical picture and course of syphilis
RS BABAYANTS AND BI ZUDIN (Moscow, USSR). *Vestn Dermatol Venerol* 1981; June:4-7.

Syphilitic phlebitis simulating branch vein occlusions
LA LOBES AND JC FOLK (Eye and Ear Hospital, Pittsburgh, Pennsylvania, USA). *Ann Ophthalmol* 1981;**13**:825-8.

Primary syphilis of the tonsil: presentation of four cases
WA VIERS (Washington University School of Medicine, St Louis, USA). *Laryngoscope* 1981;**91**:1507-11.

Syphilis (pathology and experimental)

Plasmid DNA in *Treponema pallidum* (Nichols): potential for antibiotic resistance by syphilis bacteria
MV NORGARD AND JN MILLER (Department of Microbiology and Immunology, University of California, USA). *Science* 1981;**213**:553-5.

Treponemal DNA was obtained from purified *T pallidum* (Nichols) by treatment with lysozyme in a hypotonic lysis buffer followed by ribonuclease. Column chromatography on Sephacryl S-300 to remove impurities showed a peculiar shoulder just before the peak due to RNA. Further analysis showed this to be DNA which was not the same as that found in rabbit mitochrondrial cells. The molecules were examined by transmission electron microscopy and found to be circular, 3·62 μm in length, and 7·5 × 10^6 daltons in weight. The authors think that approximately 10 plasmids existed in each cell of *T pallidum*.

The importance of this finding is in the role that plasmids play in conferring resistance to antibiotics. It could mean that resistance to penicillin in *T pallidum* is now a possibility in the near future.

G D Morrison

Fluorescent treponemal antibody-absorption double-staining procedure
E HUNTER, BJ PENDER, EJ KENNEDY, *ET AL* (Center for Disease Control, Atlanta, Georgia, USA). *J Clin Microbiol* 1981;**14**:184-8.

Gonorrhoea (clinical)

Gonococcal urethritis with bilateral tysonitis and periurethral abscess
S SUBRAMANIAN (General Infirmary, Leeds, UK). *Sex Transm Dis* 1981;**8**:77-8.

Screening for gonorrhoea in a prenatal clinic in South East Asia
RH GOH, YFN GEOW, AND SK TEOH (Department of Obstetrics-Gynaecology, University of Malaya, Kuala Lumpur, Malaysia). *Sex Transm Dis* 1981;**8**:67-9.

Gonorrhoea (microbiology)

Auxotypes and antibiotic susceptibilities of *N gonorrhoeae* from women with acute salpingitis: comparison with gonococci causing uncomplicated genital tract infection

DL DRAPER, JF JAMES, WK HADLEY, AND RL SWEET (University of California, San Francisco, USA). *Sex Transm Dis* 1981; **8**:43-50.

Electron microscopy of the gonococcal capsule

JO HANDLEY, KR POWELL, NL SALOMONSKY, AND RR RODEWALD (University of Virginia, Charlottesville, USA). *J Infect Dis* 1981; **143**:796-802.

Primary isolation of *N gonorrhoeae* on haemoglobin-free NYC medium

PA GRANATO, C SCHNEIBLE SMITH, AND LB WEINER (Syracuse, New York, USA). *J Clin Microbiol* 1981; **14**:206-9.

β-lactam susceptibility of *Neisseria gonorrhoeae* isolated from pelvic inflammatory disease

G PINON, R QUENTIN, P LAUDAT, AND R VARGUES (Bretonneau Hospital, Tours, France). *Antimicrob Agents Chemother* 1981; **20**:260-1.

Comparative in vitro activity of Mk-0366 and other selected oral antimicrobial agents against *Neisseria gonorrhoeae*

MY KHAN, Y SIDDIQUI, AND RP GRUNINGER, (Hennepin County Medical Center, Minneapolis, USA). *Antimicrob Agents Chemother* 1981; **20**:265-6.

Effects of β-lactam antibiotics on peptidoglycan synthesis in growing *Neisseria gonorrhoeae* including changes in the degree of O-acetylation

JK BLUNDELL AND HR PERKINS (Department of Microbiology, University of Liverpool, Liverpool, UK). *J Bacteriol* 1981; **147**: 633-41.

Ampicillin treatment of *N gonorrhoeae* in vivo: an experimental study in rabbits

T ELMROS, SE HOLM, E KJELLBERG, AND B WINBLAD (Umea University, Umea, Sweden). *Acta Pathol Microbiol Scand (B)* 1981; **89**:143-8.

Evaluation of the Phadebact gonococcus test in the identification of *Neisseria gonorrhoeae* in a routine diagnostic laboratory

DS TOMPKINS, BBG NEHAUL, CAF SMITH, AND EM COOKE (Department of Microbiology, University of Leeds, Leeds). *J Clin Pathol* 1981; **34**:1106-9.

The Phadebact gonococcus test, a coagglutination procedure for confirming the identity of presumptive *N gonorrhoeae* isolates, was evaluated under normal working conditions in a routine diagnostic laboratory and compared with an immunofluorescence technique. Of 166 isolates of *N gonorrhoeae* from urogenital, rectal, and pharyngeal sites, 164 gave a positive coagglutination reaction and one of the two negative isolates gave a positive reaction on retesting after subculture. There were no cross-reactions with other organisms tested. This was in contrast to the immunofluorescence technique; with this method, three of 46 isolates of *N meningitidis* fluoresced brightly and a further 17 isolates of *N meningitidis* gave reactions that were difficult to interpret.

The coagglutination test is rapid, simple, and a more specific alternative to immunofluorescence.

Authors' summary

Gonorrhoea (therapy)

Comparative in vitro activity of eight cephalosporins on 108 strains of *N gonorrhoeae* and 60 strains of *N meningitidis*

A THABAUT, JL DUPOSOIR, AND P SALLOU (Hôpital Militaire, Begin, St Mandé, France). *Chemotherapy* 1981; **27** suppl 1: 19-24.

Office management of gonococcal urethritis

HH NEUMANN (New Haven Department of Health, New Haven, USA). *Sex Transm Dis* 1981; **8** suppl 2: 100-4.

A three-day doxycycline regimen for treatment of gonorrhoea

HH NEUMANN, F KAY, AND C FENGER (Department of Health, New Haven, USA). *Sex Transm Dis* 1981; **8**:73-4.

Comparative study between gentamicin and spectinomycin in the treatment of infections due to penicillin-resistant gonococci

SS PAREEK AND MNH CHOWDHURY (University of Riyadh, Saudi Arabia). *Curr Ther Res* 1981; **30**:177-80.

Non-specific genital infection

Epidemiology and control of non-gonococcal urethritis and genital chlamydial infections—a review

FN JUDSON (Disease Control Service, Denver, Colorado, USA). *Sex Transm Dis* 1981; **8** suppl 2: 117-26.

Evaluation of doxycycline hyelate in the treatment of non-gonococcal urethritis

PJ McNEIL, NJ FIUMARA, JJ CALIANDO, *ET AL* (Massachusetts Department of Public Health, Boston, USA). *Sex Transm Dis* 1981; **8** suppl 2: 127-31.

Chlamydial infection of the female genital tract with emphasis on pelvic inflammatory disease—a review of Scandinavian studies

PA MÅRDH, BR MØLLER, AND J PAAVONEN (University of Lund, Sweden). *Sex Transm Dis* 1981; **8** suppl 2: 140-55.

Chlamydial infections. A worldwide problem: epidemiology and implications for trachoma therapy

J SCHACHTER AND CR DAWSON (George Williams Hooper Foundation, University of California, San Francisco, USA). *Sex Transm Dis* 1981; **8** suppl 2: 167.

Recovery and identification of human genital tract mycoplasma

D TAYLOR-ROBINSON AND PM FURR (Clinical Research Centre, Harrow, UK). *Isr J Med Sci* 1981; **17**:648-53.

Therapy for non-gonococcal urethritis: double-blind randomised comparison of two doses and two durations of minocycline

WR BOWIE, R ALEXANDER, JB STIMSON, JF FLOYD, AND KK HOLMES (Department of Medicine, University of British Columbia, Victoria, BC, Canada). *Ann Intern Med* 1981; **95**:306-11.

Chlamydial genital infections—manifestations and management
RE ELLIS (University of Texas, San Antonio, Texas, USA). *South Med J* 1981;**74**:809-13.

Cultural method for large-scale screening for *Chlamydia trachomatis* genital infection
H MALLINSON, S SIKOTRA, AND OP ARYA (Regional Public Health Laboratory, Fazakerley Hospital, Liverpool, UK). *J Clin Pathol* 1981;**34**:712-8.

Established methods for the culture of *C trachomatis* are time-consuming, labour intensive, and not generally suitable for screening purposes. This method incorporates two new ideas. Firstly, a microplate consisting of 96 individual wells in which idoxuridine-treated McCoy cells are grown as monolayers is used as the culture system, and, secondly, periodic acid-Schiff reagent is used for staining (tissue culture cells stain blue and chlamydial inclusions bright magenta). The microplate may be processed as an individual unit (cross-contamination between the closely spaced wells being avoided by careful technique) obviating the need to centrifuge and stain cultures individually. PAS staining enabled direct microscopy to be used and compared favourably with darkfield microscopy of Giemsa-stained conventional coverslip cultures, the inclusions being more readily apparent.

Comparison of inclusion counts on coverslip and microplate wells showed the latter to be about 7·6-fold less sensitive (mainly due to the smaller inoculum used). In practice this decreased sensitivity would only lead to false-negative results on those specimens showing 1-7 inclusions by the coverslip methods. It has been shown that such low counts occur in only a small proportion of chlamydia-positive patients. It is therefore claimed that if the microplate method is applied to women attending STD clinics, for example, it would detect 91·8% of those in whom *C trachomatis* infection could be demonstrated by conventional methods.

This technique could be applied to the examination of 384 (4 × 96 wells) specimens concurrently and is sufficiently sensitive to form the basis of a chlamydial culture service for patients attending STD clinics.

J R Willcox

Reiter's disease

Reiter syndrome in association with enteritis due to *Campylobacter foetus* ssp *jejuni*
A PONKA, J MARTIO, AND TU KOSUNEN (Department of Bacteriology and Immunology, University of Helsinki, Finland). *Ann Rheum Dis* 1981;**40**:414-5.

Reiter's syndrome—a review and case report
MA TOZZI, R STAMM, AJ BIGELLI, AND DJ HART (Cleveland, Ohio, USA). *J Am Podiatry Assoc* 1981;**71**:418-22.

Cell-mediated immune responses of synovial mononuclear cells to sexually transmitted, enteric, and mumps antigens in patients with Reiter's syndrome, RA, and AS
DK FORD, DM Da ROSA, AND P SHAH (Arthritis Center, Vancouver, Canada). *J Rheumatol* 1981;**8**:220-33.

Reiter's syndrome—evaluation of preliminary criteria for definite disease
RF WILLKENS, FC ARNETT, T BITTER, *ET AL* (University of Washington, Seattle, USA). *Arthritis Rheum* 1981;**24**:844-9.

A retrospective evaluation of 83 patients with Reiter's syndrome (RS) and 166 controls with arthritis was carried out to assess the preliminary criteria for definite RS. Data analysis was based on the statement that Reiter's syndrome consists of an episode of peripheral arthritis of more than one month's duration occurring in association with urethritis or cervicitis or both. During the initial episode of RS, 70 of the 83 patients with RS satisfied the criteria, yielding a sensitivity of 84·3%.

Authors' summary

Candidosis

Sensitivity of *Candida* spp to 5-fluorocytosine, amphotericin B, and imidazoles
E SAKELL AND A RIDES (Institute of Microbiology, University of Lausanne, Switzerland). *Schweiz Med Wochenschr* 1981;**111**:1367.

Tissue response to the blastospores and hyphae of *Candida albicans* in mice
ZA EVANS (University of Alabama, Huntsville, Alabama, USA). *J Med Microbiol* 1981;**14**:307-20.

Responses of human peripheral lymphocytes to soluble and insoluble antigens of *Candida albicans*
SMM GETTNER AND DWR McKENZIE (Pahlavi University, Shiraz, Iran). *J Med Microbiol* 1981;**14**:333-40.

Genital herpes

Concurrent oral and genital infection with an identical strain of herpes simplex virus type I restriction endonuclease analysis
JA EMBIL, FR MANUEL, AND ES McFARLANE (Halifax, Nova Scotia, Canada). *Sex Transm Dis* 1981;**8**:70-2.

Inhibition of herpes simplex virus transformed and non-transformed cells by acycloguanosine: mechanisms of uptake and toxicity
RL DAVIDSON, ER KAUFMANN, CS CRUMPACKER, AND LE SCNIPPER (Children's Hospital Medical Center, Boston, USA). *Virology* 1981;**113**:9-19.

Genital herpes simplex
IS TUMMON, DKL DUDLEY, AND JH WALTERS (Ottawa, Canada). *Can Med Assoc J* 1981;**125**:23-9.

Risk of recurrence after first episodes of genital herpes
WC REEVES, L COREY, HG ADAMS, LA VONTVER, AND KK HOLMES (Virology Laboratory, Children's Orthopaedic Hospital, Seattle, USA). *N Engl J Med* 1981;**305**:315-9.

To define risk factors associated with recurrent genital herpes simplex virus infection caused by either type 1 or 2 herpesvirus (HSV-1 or HSV-2), 137 patients with a first symptomatic episode of the disease and 87 with a recurrent episode were studied prospectively. First episodes were divided into 78 primary infections (no antibodies present). HSV-1 infections were less frequent and less likely to recur than HSV-2 infections. Of primary first episodes, 15% were caused by HSV-1 compared with 3%

of non-primary first episodes and 2% of recurrent episodes. Moreover, during follow up of first-episode patients, only 14% of HSV-1 infections recurred compared with 60% of HSV-2 infections. Recurrences were more likely to follow an index recurrent episode than an index first episode, whether primary or non-primary, and to occur in men than in women. Among patients with primary HSV-2 infections the probability of recurrence was directly related to the titre or presence of neutralizing antibody to HSV-2 in convalescent-phase serum.

Authors' summary

Other sexually transmitted diseases

Sexual transmission of enteric protozoa and helminths in a venereal disease clinic population

SC PHILIPS, D MILDVAN, DC WILLIAM, *ET AL* (Beth Israel Medical Center, New York, USA). *N Engl J Med* 1981;**305**:603-6.

The prevalence of enteric protozoan and helminthic infections and the associations between infection and gender, sexual preference, and sexual practices in 180 consecutive patients at a venereal disease clinic were examined. Of 163 men, 29 were infected with one or more enteric parasites. None of the 17 women had an enteric infection. The prevalence of infections with *Entamoeba histolytica* or *Giardia lamblia* (or both) was 21·5% in homosexual men, 6·2% in bisexual men, and 0% in heterosexual men. There were significant associations between oro-anal sexual contact and infection with *E histolytica* ($P<0·01$) or with helminths ($P<0·05$). Homosexuality and oro-anal contact were the most important risk factors for *E histolytica, G lamblia,* and helminthic infections. Hyperendemic enteric protozoan infection rates in homosexual men appear to be related to three factors: the original endemic level in the general population; the prevalence of sexual acts that facilitate transmission; and the frequency of exposure to an infected person.

Authors' summary

Human papilloma virus type 1 purified from human genital warts

MJ STAQUET, J VIAC, R BUSTAMENTE, AND J THIVOLET (Dermatology Clinic, Hôpital Edouard-Herriot, Lyon, France). *Dermatologica* 1981;**162**:213-9.

Human papilloma virus (HPV) was isolated from a pool of genital warts. The electrophoretic mobility of virion proteins was studied by SDS polyacrylamide gel electrophoresis and showed the same pattern as that obtained with HPV-1. The analysis of DNA after restriction enzyme digestion with the endonucleases Hind III and Hae III and nucleic acid hybridisation did not show any difference with HPV-1. The viral particles were agglutinated by anti-HPV-1 serum, as shown by the electron microscopic particle agglutination test. Furthermore, the immunological properties of this virus were investigated with guinea pig antiserum. Serologically, no antigenic cross-reaction between common and genital wart viruses was shown by immunodiffusion and immunofluorescence tests, whereas cross-reactions were detected between plantar and genital wart viruses. These results possibly indicate that HPV-1 can induce plantar warts as well as genital warts.

Authors' summary

Public health and social aspects

Syphilis and gonorrhoea: epidemiology update

E KAKLAMANI, D TRICHOPOULOS, *ET AL* (University of Athens, Greece). *Paediatrician* 1981;**10**:207-15.

Penicillinase-producing gonococci in Britain

AE JEPHCOTT, N DICKGIESSER AND AN McCLEAN (Public Health Laboratory Service, Bristol, UK). *Lancet* 1981;ii: 247-8.

The gay report on sexually transmitted diseases

WW DARROW, D BARRETT, K JAY, AND A YOUNG (Center for Disease Control, Atlanta, Georgia, USA). *Am J Public Health* 1981;**71**:1004-11.

Serogrouping and auxotyping for epidemiological study of β-lactamase-producing *Neisseria gonorrhoeae* strains isolated in Sweden

S BYGDEMAN, I KALLINGS, AND D DANIELSSON (Karolinska Institute, Stockholm, Sweden). *Acta Derm Venereol* 1981;**61**: 329-34.

Public health implications and control of sexually transmitted chlamydial infections

HH HANDSFIELD, WE STAMM, AND KK HOLMES (United States Public Health Service, Seattle, Washington, USA). *Sex Transm Dis* 1981;**8**:85-6.

Initiation of the sexually transmitted diseases prevention/training program

S MARGOLIS (Center for Disease Control, Atlanta, USA). *Sex Transm Dis* 1981;**8**: 87-8.

Failure to identify venereal disease in a lesbian population

P ROBERTSON AND J SCHACHTER (Santa Monica, California, USA). *Sex Transm Dis* 1981;**8**:75-6.

An evening clinic specifically designated for a study into sexually transmitted diseases and the prevalence of cervical dysplasia in sexually active lesbians (SAL) was set up for three months in the autumn of 1978 at San Francisco General Hospital. An SAL was defined as a woman who had been sexually active solely with women in the past six months. Of 148 women, 13% had been sexually active with bisexual women; the remainder were exclusive lesbians. In the previous year the mean number of partners was 2·3 (range 1-30) and 53% had one partner only. Eighty-nine per cent had had previous coital experience with men. Ages ranged from 17-51 years, mean 28 years; 92% were Caucasian.

Recognised routine methods were used to test for syphilis, cervical gonorrhoea, and both herpes simplex and *Chlamydia trachomatis* infections of the cervix. Cervical cytology was studied using the Papanicolau smear. No apparent sexually transmitted diseases were found. Cervical atypia, ranging from mild dysplasia to carcinoma in situ, was detected in four (2·7%) women. The authors suggest that routine screening for venereal disease may not be cost-effective in a lesbian population, but the routine examination of Papanicolau smears should be encouraged.

The methods used for screening for sexually transmitted diseases lack tests for detecting *T vaginalis* and *C albicans* infections as well as urethral infections.

Michael Waugh

Miscellaneous

Therapeutic decisions in the treatment of sexually transmitted diseases: an overview
MF REIN (University of Virginia, Charlottesville, Virginia, USA). *Sex Transm Dis* 1981;**8**suppl 2:93-9.

Diagnosis and treatment of pelvic inflammatory disease in the emergency room
RL SWEET (San Francisco General Hospital, San Francisco, USA). *Sex Transm Dis* 1981;**8**suppl 2:156-63.

Pelvic inflammatory disease in the United States: incidence and trends in private practice
RK St JOHN, J BLOUNT, AND O JONES (Center for Disease Control, Atlanta, Georgia, USA). *Sex Transm Dis* 1981;**8**:56-61.

Pelvic inflammatory disease in the United States: epidemiology and trends among hospitalised women
RK St JOHN, O JONES, JH BLOUNT, AND AA ZAIDI (Center for Disease Control, Atlanta, Georgia, USA). *Sex Transm Dis* 1981;**8**:62-6.

Granuloma venereum—a rare imported venereal disease
H HOYER AND K WEISMANN (Finsen Institute of Dermatology, Copenhagen, Denmark). *Hautarzt* 1981;**32**:374-5.

Rapid identification of *Corynebacterium vaginale* in non-purulent vaginitis
JI WELLS AND SH GOEI (King Edward Memorial Hospital for Women, Perth, Australia). *J Clin Pathol* 1981;**34**:917-20.

To assess the accuracy of a simple set of tests which can be performed on suspected colonies of *Corynebacterium vaginale* on the day of isolation, 1402 unselected women attending gynaecological clinics were studied. Samples from the endocervix and vaginal fornices were cultured on selective media for *Neisseria gonorrhoeae, Trichomonas vaginalis, Candida* and related yeasts, anaerobic pathogens, and *C vaginale* using the modified peptone starch dextrose (PSD) agar of Dunkleberg and growth under anaerobic conditions compared with 5% CO_2. Suspicious colonies (white with slightly darkened centres and displaying starch hydrolysis) were Gram-stained, Albert-stained, and tested for catalase production. Those isolates that were Gram-variable diphtheroid bacilli producing metachromatic granules and were catalase-negative were recorded as *C vaginale*.

Of the 1402 patients, *C vaginale* was identified in 380 but was only considered to be pathogenic in 70 who complained of an abnormal vaginal discharge. Of these 70, *C vaginale* was confirmed in 66 using the described tests, a 94% rate of accurate identification. When the hydrolysis of hippurate, specific for *C vaginale,* was added the accuracy was increased to more than 97%. All the isolates grew under anaerobic conditions but only 70% under CO_2, and a heavy virtually pure growth of *C vaginale* was found in 66 of the 70. The appearance of clue cells in the vaginal discharge correlated poorly with the culture results (present in about 20%), but a typical Gram-stained appearance of (a) few or no leucocytes, (b) many epithelial cells, and (c) masses of Gram-variable coccobacilli was found in all 70.

With the increasing acceptance of the role of *C vaginale* in non-purulent vaginitis the advantages of rapid identification are obvious; however, its role in such a subjective complaint (82% were allegedly asymptomatic in this survey) requires further elucidation.

R S Pattman